

In the Matter of  
 Amendment of Part 90 of the  
 Commission's Rules to Adopt  
 Regulations for Automatic  
 Vehicle Monitoring Systems

PR Docket No. 93-61  
 RM-8013

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COMMENTS OF PROXIM INC.

Proxim Inc. hereby submits its comments in response to the FCC's Notice of Proposed Rulemaking ("NPRM") in the above captioned proceeding which proposes extensive changes to the interim rules governing Automatic Vehicle Monitoring ("AVM") systems.

I. INTRODUCTION

Proxim Inc. is involved in the development and marketing of unlicensed wireless products designed to operate under the Commission's Part 15 rules. Proxim provides wireless data communications products for the desktop and rapidly growing portable personal computer market. This latter area includes laptop computers which are shipping at the annual rate of 1.5M units and growing at 40% per year. It also includes the newly emerging portable communicator devices. In addition to the consumer market, the company also provides wireless communications products for applications in healthcare, manufacturing, inventory control and financial services.

These products were made possible by the Commission's Part 15 rules that encouraged companies to invest in the development of unlicensed products in this band. The investment to date at Proxim is in the tens of millions of dollars. Furthermore, in compliance with the Part 15 rules, Proxim has made substantial investment in software and

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hardware to permit interference sharing among other unlicensed Part 15 users of the 902-928 MHz band. In addition, the company has added costs to our products in order to conform to the Rules. Nonetheless, the company has built a rapidly growing spread spectrum wireless business that has attracted the attention of competition from countries as Japan. It has also attracted the interest of distributors from Mexico, Great Britain, China, Japan, Brazil, Germany, Australia, New Zealand, and a great number of lesser known countries. An emerging export market is taking place with U.S. companies, such as Proxim, taking a leadership role. This proceeding places the U.S. leadership in jeopardy by killing the home market before the U.S. companies can reach critical size to sustain a battle against overseas competitors.

The rule changes proposed in this proceeding fundamentally alters the conditions under which this new industry for unlicensed Part 15 applications developed, in which the US is now the leader. The implied pact between the FCC and industry was: comply with the technical rules, protect the primary ISM and government users and co-exist with the nascent AVM industry and you can operate license-free. Proxim has complied with that pact.

The Automatic Vehicle Monitoring (AVM) industry and the Part 15 industry have co-existed for several years. The interim rules under which they have co-existed should not be radically changed. These rules, which form the basis under which both the Part 15 and the AVM industry developed, should be the foundation upon which both industries go forward.

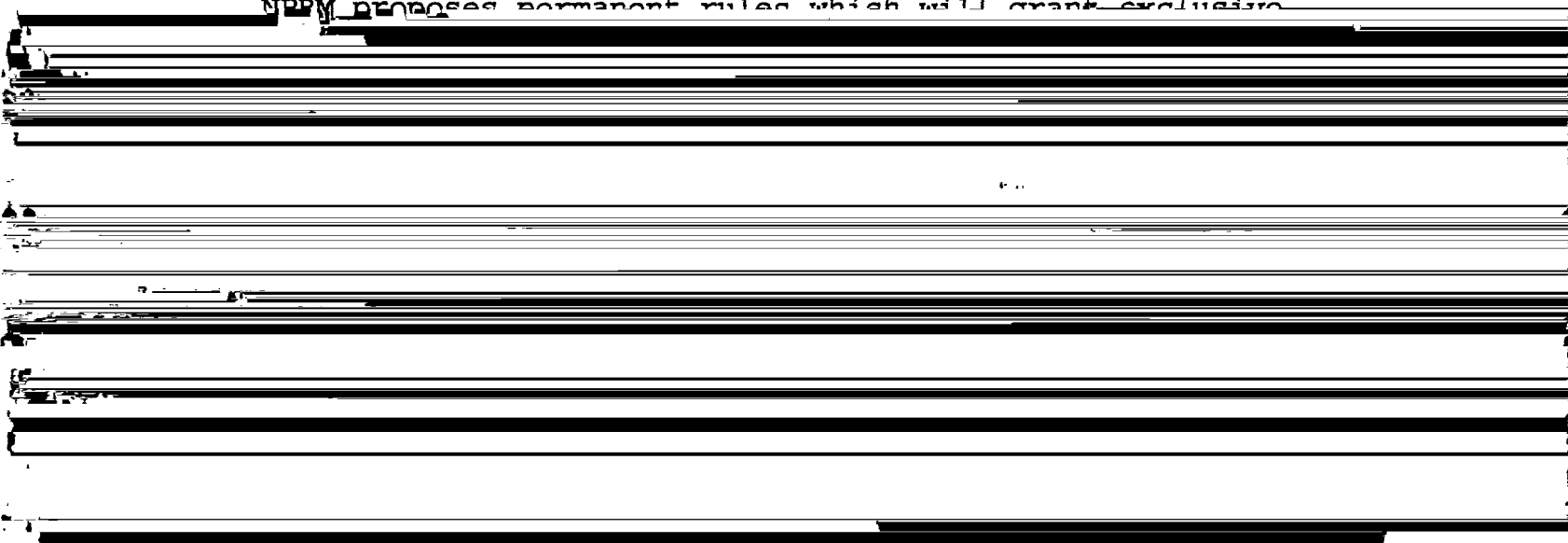
Accordingly, Proxim requests that the FCC abandon the radical expansion of the AVM service and return AVM and the Part 15 to the status quo and not expand the AVM rules into a broad location, monitoring and messaging service for which

there is little demonstrated need and which could easily be provided by other systems in other spectrum.

## **II. Discussion**

In this proceeding, the Commission proposes to change Part 90 of its rules to greatly expand the current interim rules governing automatic vehicle monitoring (AVM) systems to authorize the 902-928 MHz ("900 MHz") band to be used for a broad location and messaging service in addition to vehicle monitoring.

The NPRM contains proposed rule changes which will expand the definition of AVM to include the monitoring and location of people and inanimate objects in addition to vehicle. Further, the proposal allows the transmission of a broad range of "status and instructional messages" which will have the effect of creating a extensive messaging service within the service. Services already exists for messaging such as those offered by ARDIS, the joint venture between IBM and Motorola, and RAM Mobile Data, the joint venture between Bell South and Ericsson. This new expanded service will be redesignated Location and Monitoring Service("LMS"). Additionally, the NPRM proposes permanent rules which will grant exclusive



Hundreds of Part 15 applications co-exist under the Part 15 regulations. This co-existence is made possible through the use, by Part 15 manufacturers, of advanced digital and analog technology and controlled power limits.

It is this balance between low-powered advanced technology systems and higher powered AVM systems which the expansion of AVM in this band will upset. Expansion of the current LMS systems will use "old technology" in its centralized and nomadic transceivers to provide the extensive coverage required for an expanded LMS. The extensive changes proposed in this rulemaking insures that LMS will interfere with and be interfered by existing Part 15 equipment.

It is therefore, premature and inappropriate to greatly expand the permissible use of this band and formally establish an exclusive right within this band without first evaluating the level of interference which will result and scope and importance of competing uses. This also applies to any of the Part 15 bands of operation. Furthermore, given the multitude of location and messaging options available to the consumer in other services and other spectrum, the public interest served by hundreds of applications of Part 15 devices in operation or under development far outweighs the more limited public interest served by expanding the use of this band to provide "one more" approach for the location of objects and people.

In 1985, the FCC published rules which encouraged and facilitated the commercial development of advanced radio technology. The Commission permitted unlicensed operation in

[REDACTED]

techniques. In 1990, the Commission further refined the rules governing unlicensed wireless applications and today Commission rules allow spread spectrum technology to operate, license free with output power as high as 1 watt ERP.

In response to these rules, a new wireless industry sector was created. The Part 15 industry invested nearly two billion dollars in research, development, and production of new commercial products. Consumer products are in the marketplace with the volume beginning to grow. The year of 1993 will be a watershed year in terms of new products and deployment of spread spectrum products in the consumer markets.

Proxim Inc., a entrepreneurial company, has developed a family of products designed for the consumer market. Proxim's RangeLAN products are designed to allow personal computer users to network their PCs, modems, and printers without the need for wires. The products are targeted for both desktop and portable computer users.

In addition to the consumer market, industries such as healthcare, retailing and manufacturing are using Proxim's Part 15 products in improve productivity. In the healthcare industry, nurses using a portable handheld computer can enter and retrieve information instantly on a patient. This eliminates costly duplicate work, reduces errors and improves the work environment. The net benefit is a reduction in the cost of healthcare. In the area of manufacturing, data can be collected instantly on products moving down an assembly line. This allows much greater monitoring and therefore results in higher quality products. Proxim's wireless technology is being used to improve the efficiency of American industries and reduce their cost of doing business. This results in companies that are more competitive on an international basis.

The early promulgation of the Part 15 rules by the FCC has allowed US manufacturers to take the lead in the creation of spread spectrum commercial product development. As the result of establishing an early customer base and working with our customers, Proxim is now well positioned to begin exporting its products into the international markets. This lead in technology, products, and market requirements gives Proxim the potential to grow into a major corporation that can have a major export component to its revenues. A number of overseas companies have approached Proxim to distribute products or embed Proxim's products into their products.

The proposed rule negates our market lead against foreign competition by forcing the company to redesign its products for a different band of operation. This will allow foreign competitors to enter into the market and compete against our firm on a even basis from a product perspective. This runs counter to the need to make America companies more competitive and more export driven.

Proxim Inc., along with a number of other companies supplying Part 15 spread spectrum products, has been a venture capital financed. The venture capital industry has been responsible for providing much needed capital to such

greatly expand the use of this band beyond vehicle monitoring into location and messaging services. The expansion into location and messaging will cause severe interference between commercial and consumer Part 15 products and LMS systems.

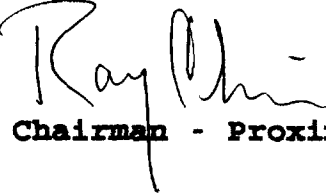
Preserving the status quo is the only fair and equitable solution to the current situation. There is no public interest served by FCC action to expand the use of the AVM's. In fact, an FCC decision to abandon the proposed rule changes will return all parties to their original position which will make the best of an unsatisfactory situation.

The Commission should evaluate the competing uses of this band and balance the public interest prior to investing one licensee with the pre-emptive rights to expand service in this spectrum.

### III. Conclusion

Proxim Inc. recommends to the FCC that it return the situation to the status quo ante. This will allow the Part 15 industry to continue its rapid growth. It will assist US companies in maintaining their lead in this new wireless technology area and allow for export driven growth. It will encourage further capital investment into companies in this area. This will further result in new applications being developed and brought into the marketplace.

Raymond Chin

A handwritten signature in black ink, appearing to read 'Ray Chin', written over the printed name and title.

Chairman - Proxim Inc.